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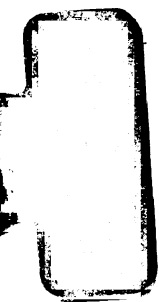
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1609

4070



SOME
A C C O U N T
OF THE
BAY AND HARBOUR
OF
F I S H G U A R D,
IN
*PEMBROKE*SHIRE,
AND OF THE
P R O P O S E D P I E R
TO BE CONSTRUCTED THERE FOR THE SAFETY
OF VESSELS NAVIGATING
THE IRISH CHANNEL.



1609/4070.

SOME ACCOUNT OF THE
BAY AND HARBOUR
OF
FISHGUARD IN *PEMBROKESHIRE*,
AND OF THE
PROPOSED PIER
TO BE CONSTRUCTED THERE FOR THE SAFETY
OF VESSELS NAVIGATING
THE IRISH CHANNEL.

THE dangers with which the navigation of the southern part of the Irish Channel is attended, from the want of deep and safe harbours upon the Welch coast, has long been the subject of complaint among seamen ; and the severe losses which our merchants and underwriters so frequently suffer are melancholy proofs how well those complaints are founded, and of

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the great injury the commerce of both islands sustains thereby: for it is not the ships only which are lost in the Bay of Cardigan that are to be placed to the account of the want of proper places to put into there, but many of those which are lost upon the Irish coast owe their misfortune to the same cause, as for that reason they keep near, or, as the seamen call it, hug the Irish coast in their passage both up and down the Channel, and thereby expose themselves to be forced among the shoals and rocks of Wexford or Wicklow, in case the wind comes to blow hard from such quarters as renders that coast a lee shore. The discovery, therefore, of a harbour upon the Welch coast between Studwell and St. David's Head, which may at a small expence be made a place of safety for any ship that passes up or down the Irish Channel, was considered as an object of so great importance by the Board of Admiralty, that, in consequence of the representations



representations contained in the annexed petition, intended to be presented to the House of Commons, their Lordships were pleased to give directions to Mr. Spence to make a survey of Fishguard Bay and Harbour, and to make a plan of a proper pier, and an estimate of the expence of it — a service which that gentleman has executed with the most extraordinary diligence, skill, and accuracy, as appears from his surveys and plan, and his letter in explanation of them, presented to the Board, and of which their Lordships have been pleased to permit copies to be taken for the public information. As, however, the engraving the surveys of the Bay and Harbour, together with a sketch of the southern part of the Irish Channel, which Mr. Spence has executed upon three different sheets, will be attended with a considerable expence, this publication is now made to give some idea of the general utility of the perfor-

mance, and to incite subscribers to its publication also; and, in order to encourage its circulation, the price is reduced so low as one guinea for a set, consisting of a copy of the three plans, and each subscriber will receive a copy of this pamphlet. In the mean time, it is hoped that the trade of the Irish Channel will be much benefited by communicating to the masters of the trading ships the information it contains respecting the present state of Fishguard Bay and Harbour as a place of safety in the cases therein described; and travellers from Ireland will see by it that the packets from Waterford have the peculiar advantage of the choice of two ports to put into, according as the wind may serve; for if it blows so strong from the south as to make it difficult to reach Milford Haven, they can easily run up St. George's Channel, and put into Fishguard, which is only twelve miles from Haverfordwest,

fordwest, and to which a turnpike road is now making.

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C O P Y

OF A

PROPOSED PETITION

TO

PARLIAMENT.

*To the Honourable the Knights, Citizens,
and Burgeffes, in Parliament assembled.*

The humble Petition of the feveral Owners
and Mafters of Ships whose Names are
thereunto fubfcribed, in Behalf of them-
felves and others trading in or through
the South Part of the Irish Channel,

HUMBLY SHEWETH,

THAT between Holyhead and Milford
Haven there is no harbour upon the Welch

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side of the Irish Channel (or any road except Studwell in Caernarvonshire) in which ships or vessels of any considerable burden can enter and find proper shelter in case of their meeting with tempestuous weather in their passage through that part of the Channel.

That the Bay of Fishguard is situated on the north side of Pembrokeshire, and may be readily made and entered by vessels who cannot get round St. David's Head and the Smalls, so as to put into Milford Haven.

That the said Bay is open and free from rocks and shoals, and, having no bar, may be entered by ships of the largest burden, and at all times of tide.

That so great a number of vessels have and do seek shelter therein, that more than fourscore sail have been reckoned at anchor within

within it at one time in the course of the year 1789.

That it being nevertheless much exposed to the northerly winds, which drive a very heavy sea into it, the vessels riding within it are often drove from their anchors, notwithstanding the goodness of the anchorage, or parted from their cables and forced ashore, of which the wrecks of several now to be seen are melancholy proofs.

That upon the east side of the said Bay there is a projecting head, which now forms a small cove, in which there is eight feet water at low water, spring tides, and twelve at neap tides, and where the tide now rises five feet at neap tides, and fourteen at spring tides; insomuch that ships drawing twelve feet water might come safely into it at half flood at all times, and those of a still greater draught at high water, should they find themselves in danger in the Bay, or come

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into

into it in distress, if they had sufficient room to lie within the cove, which would be the case if a Pier was extended from the said head into the Bay for the space of about five hundred feet, within and below which a great number of ships of a large size, as well as small vessels, might lie in the most perfect safety.

That, from the peculiarly happy construction of the Bay and Harbour, a very large body of water passes the said head at flood tide, and extends itself within land, the greatest part of which they apprehend might be easily directed to scower the inside of the Pier in its return to the sea at the ebb, by constructing a low wall from the opposite side of the Harbour, and thereby preventing the water becoming shallower within the Pier than it now is; and in case it was judged proper to increase the depth at low water, by scooping out a basin within the Pier, so that ships draw-

ing

ing more than nine feet might lye afloat there at all times of tide, the current would be sufficiently forcible not only to prevent its filling up, but, by its operation upon the sandy bottom, render the basin still deeper.

To effect so important a public service, and procure so great a benefit to the trade and navigation of Great Britain and Ireland, the Petitioners are informed no very considerable sum of money would be required, as they understand Gwynne Vaughan, Esquire, the proprietor of the said head, in order to promote so useful a work, proposes to make a conveyance of his property therein to the Public, and also of so much of the adjacent land as may be necessary for a road to it, without demanding any other rent or purchase for the same than the payment of a pepper-corn in acknowledgement of his title: they, therefore, humbly beg leave to submit the pre-

mises to the consideration of this honourable House.

The foregoing Petition is already signed by the Masters of all the Packets between Milford Haven and Waterford, and by the Masters of the Linen Ships between Ireland and London, and by forty-nine Masters of other Coasting Vessels in the Irish and British Channel; and is recommended in the following terms by the Underwriters at Lloyd's Coffee House;

“ The undersigned Underwriters re-
 “ commend the prayer of the prefixed Pe-
 “ tition to the consideration of Govern-
 “ ment as an object of great importance
 “ to the navigation of the Irish Channel,”

Signed by forty-five principal
 Underwriters.

Extract

*Extract of Mr. SPENCE's Nautical
Description of FISHGUARD BAY
and HARBOUR, on the North Side
of the County of Pembroke; with
a Scheme of the Proposed Pier,
and an Estimate of the Expence
thereof.*

*To the Right Honourable the Lords Commis-
sioners for executing the Office of Lord
High Admiral of Great Britain, Ireland,
&c. &c. &c.*

May it please your Lordships,

IN obedience to your Lordships orders
to me in January last, " That as soon as
" the season was over for carrying on the
" survey of the Scilly Isles, I should re-
" pair

“ pair to Fishguard Bay in Pembroke-shire,
 “ make an accurate maritime survey of
 “ the same, and form the best estimate I
 “ could of the expence of building a Pier
 “ there for the protection of ships in the
 “ Irish Channel, and to transmit the same
 “ to your Lordships, together with any
 “ remarks that might be useful to the
 “ trade of Britain and Ireland.”

I now beg leave to lay before your Lord-
 ships my proceedings at Fishguard in as
 brief, and at the same time as distinct, a
 manner as I possibly can : in order to which
 I must beg leave to refer to the Chart,
 Plan, and Section, of the Bay, Harbour,
 and Proposed Pier, which accompany this,
 as they are explanatory of what is con-
 tained under the following heads; in which,
 and in them, the bearings are all true bear-
 ings, and not magnetic, the *variation* be-
 ing $24^{\circ} 40' W.$

First,

First, In order to give a general idea of the situation of Fishguard Bay, I have inserted a small chart of the Irish Channel, just to show that, was there a proper Pier at Fishguard, all ships in the south part of the Irish Channel, when forced by gales of southerly or westerly winds to bear away for a harbour, might safely run for Fishguard Road when they cannot fetch into Milford Haven, in preference to any other place; because Fishguard Road lies within the Irish Channel, and is the next northmost place of safety to Milford Haven, and of course the nearest road for ships outward bound who cannot get round St. David's Head and the Smalls; nor is there any place besides that large vessels can safely run for, except Studwal's Road, which is seventeen leagues farther to the northward, or to leeward. Fishguard Road too is sheltered from southerly and S. E. winds, whereas Studwal's Road is not; and should the wind suddenly shift

to

to the north-eastward while they are in Fishguard Bay, so as to make their lying in the Bay dangerous, they have only to run into the proposed Pier at Fishguard, where they will be safe from all winds and weather.

Secondly, The extent of Fishguard Bay from east to west is about three miles, and from north to south about one mile and three quarters; and the general depth of water is from thirty to seventy feet, according to the distance from the shore, which is bold all round, except off Goodic Sand, where it is flat at some distance from the shore. The quality of the bottom all over the Bay is sand, mixed with mud a little below the surface, which holds very well.

The stream of flood comes into Fishguard Bay from the N. W. round Penangle's Point and the Cow-and-Calf Rocks ;

runs

runs all round the Bay towards Dinas' Head, where it runs out again to the north-eastward. The stream of flood observes nearly a contrary direction ; but neither the ebb nor flood runs above half a knot when strongest, except close in to Penangle's Point, the Cow and Calf, and Dinas' Head, where the stream runs about two knots ; but off the harbour's mouth the stream is scarce sensible. The stream of ebb or outset from Fishguard Road towards Penangle's Point runs about an hour longer than the flood or indraught.

It may be said of Fishguard Bay, in general, that ships of the largest size may anchor in all parts of it with south-east, southerly, and westerly winds, in perfect safety.

Thirdly, Fishguard Road, properly so called, is situated in the west part of the Bay : it is sheltered on the S. E. and S.

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side

side by the land between Dinas and Fishguard; and on the W. side by the land between Fishguard and Goodic; and on the N. W. side by the land between Goodic and the Cow and Calf. It is close along this last-mentioned side where vessels generally anchor, and have the best shelter, and, except in light winds and calms, they lie mostly wind rode. The Road in general may contain above a hundred sail of vessels, large and small, well sheltered from all winds, except those from N. N. W. (N. about) to E.; but with the wind any way strong from those intermediate points in the N. E. quarter, it is exposed to the violence of the sea so much, that the best found vessels must sometimes, for fear of foundering, either cut or slip their cables and drive on shore, most commonly on Goodic Sand, where, if it be about low water, they generally bury themselves in a tide or two, the sand thereabouts being soft; but if they drive on shore about high

high water, they sometimes get off again, the sand being harder higher up. And I am well informed, that on Goodic Sand in particular, and some other parts of the Bay, there have been about seventeen sail of vessels lost within these last twenty years; all of whom might have been saved had there been a proper Pier at Fishguard to receive and shelter them.

The only shoal or rock that I could find either in the Bay or Road lies but a little way from the best anchorage in the Road, and, as far as I know, it is not laid down in any former chart: it is called Dalvah, or Holdfast, and not improperly so, for when I swept it I believe it would have held as long as an anchor: the least water on it is forty-two feet, consequently it can hurt nothing but the cables of such vessels as may unknowingly anchor near it. The most distinct marks for this rock are, the Belfry of Fishguard Church a little open to

the eastward of Saddle Point, and bearing S., and the south chimney of Mr. Rogers's house at Goodic Pier just open to the southward of Carnluid Cliff, and bearing S. W. by W. $\frac{3}{4}$ W. The best direction to avoid it is, not to anchor with the above marks on. — Marks for the best anchorage in Fishguard Road are, Pencringued Point on with Maenmoel Point, and bearing N. by W. $\frac{3}{4}$ W., and Mr. Rogers's house at Goodic Pier a little open of Carnluid Cliff, and bearing S. W. by W. $\frac{3}{4}$ W. in about twenty-four feet at low-water spring tides: the bottom sand, and mud of a clayey nature, which holds well.

There are several little coves in Fishguard Bay where vessels stop a tide or so to load slate, of which Porthquoylod is the best for shelter; but they require no particular description. — At Goodic there is a little pier for the use of the boats employed in the Herring Fishery.

I have

I have heard there was an idea of filling up the passages between the Cow-and-Calf Rocks and Maenmoel Point with stones, in order to form a pier or break-water to shelter vessels at anchor in the Road ; but I am of opinion, that, was a scheme of the kind even practicable, it would be in a manner useless, because these rocks lie in a N. N. E. direction, and consequently can afford no shelter from the very winds in the Road. The Cow Rock is always above water, and the Calf Rock only covers with very high spring tide ; they are no way dangerous : but there are several scattered rocks near them in a N. N. E. direction from the Calf, which cover and uncover daily ; so that it will be prudent to give the Calf a berth of about three quarters of a cable in failing past it.

Fourthly, Fishguard Harbour is situated towards the west side of Fishguard Bay, about three quarters of a mile S. S. E. from
the

the Road : it is of an irregular form, but capacious and of easy access, having neither rock nor bar at its entry. Its entry is about 1160 feet wide from Castle Point to Saddle Point, and its length from the entry to the bridge is about 2400 : its area or superficial content is about 1,851,300 feet ; and the general descent or fall of the bed of this Harbour from the bridge to the entry is about 20 feet in 2400.

The Harbour dries at low-water spring tides almost out as far as the entry, and with neaps nearly as far as Penmaniver Point.—The quality of the bottom of the Harbour is in general a fine dark-coloured sand, pretty hard.

Near the Entry, a little within Castle Point, there is the foundation of an old pier, where boats may lie afloat till they have water up the Harbour.

From

From Saddle Point there runs a narrow rocky ledge, which covers and uncovers daily, for about 100 feet in an E. N. E. direction; but it is no way dangerous, unless vessels keep too near to Saddle Point. And between Penmaniver Point and the opposite side of the Harbour there are several small scattered rocks and stones, which vessels must be careful not to ground upon.

The Bridge consists of five small arches, through which runs a small rivulet or fresh-water brook, called *Gwain*, (*Fisguard*, in the Welch language, being called *Abergwain*) and continues its course over or at top of the sand in the Harbour, when dry, as far as low-water mark, where it immediately loses itself in the sea, it being so small as not to occasion any current in the Harbour when the tide is in, and only serves to drive a water-mill which stands a little above the Bridge.

On

On the full and change days of the moon it is high water on the shore in Fishguard Harbour about three quarters after six, and low water a little after one. On the quarter days it is high water on the shore about a quarter after twelve, and low water a little after six. High spring tides rise and fall sometimes sixteen feet perpendicular: I observed it once to fall seventeen feet; but the rise or fall is oftener below sixteen feet than above it. Neaps generally rise and fall between four and six feet: and it is observable, both with neaps and springs, that the two middle hours of flood or ebb rise or fall nearly as much as the other four hours; also, both with neaps and springs, the tide ebbs about half an hour longer than it flows, that is, from low water to high water the time is only about five hours and a half, but from high water to low water the time is about six hours and a half.

High

High spring tides flow about 200 feet higher up than the Bridge. Neap tides do not flow so high up as the Bridge by 300 feet. At low-water neap tide the Harbour dries out as far as Penmanivor and Penllan-pit Points nearly; and with low-water spring tide the Harbour dries out as far as the old Pier inside of Castle Point, and (obliquely across) to 400 feet below Penllan-pit Point: all a fine level sand*.

Fifthly, From an attentive review of Fishguard Harbour, and its vicinity to the road, it would seem as if nature had designed it as an *asylum* to ships in distress there, but points out, as it were, the necessity of a Pier.

The scheme of the Pier I have now the

* Southerly winds make the highest tides, and northerly winds make the lowest tides.

honour to submit to your Lordships' consideration appears to me to be very well adapted to render Fishguard a safe and commodious harbour for the largest merchant ships which now use the Irish Channel, and for whom I apprehend, by the tenor of your Lordships' order to me, the Pier at Fishguard is intended.

Castle Point, on the east side of the entry into Fishguard Harbour, is by far the most proper place to build the Pier at, every circumstance duly considered.

It should be built from the inner extremity of this Point (at A in the Plan) in a W. by S. direction, or towards Saddle Point; and as the width of the entry here is about 1160 feet*, the length of the Pier, from A to C, should be 500 feet,

* Refers to the Plan.

in

in order to keep out as much of the ground swell of the sea as possible, so that vessels inside of it may lie safe and easy.— Four hundred feet of the Pier, from A to B, should be built upon a gentle curve, (whose radius is 1100 feet) the better to resist the force of the sea; the other hundred feet should be built upon a straight line from B to C, so as to form an elbow or angle with B A of about 117 degrees. : this elbow is intended to shelter vessels inside the Pier from the short breaking sea which comes out of Goodic Bay with N. W. winds.

The general depth of water in the direction of the Pier A B C, at high-water spring tide, is from 22 to 24 feet, the deepest water lying within about 100 feet of Castle Point; the height of the Pier should, therefore, be 30 feet, exclusive of the parapet wall, which should be 4 feet

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more, to keep off the breach of the sea ; and its breadth, in proportion to its length and height, should be also 30 feet. The general depth of water in the direction of the Pier, at low-water spring tide, is from 6 to 8 feet ; and the quality of the bottom in the above line of direction is fine sand, mixed with mud, not very hard, as I have bored it in many places to the depth of 7 feet, and found neither rock nor stone. At high-water neap tide there is about 17 feet, and at low-water neap tide about 12 feet, in the general direction of the Pier.

It would be of great use to vessels coming into the Pier, if a flag was to be hoisted near C when there was 12 feet water at the Pier Head ; and in the night time a small light should be hoisted there for the like purpose.

A cap-

A capstan will be necessary on the Pier Head, to assist vessels coming in or out. — There should also be 8 Pier posts at convenient distances between A and C for vessels to make fast to; and 18 wooden fenders, placed up and down inside of the Pier, for vessels to lie against. — There should be a flight of stone steps near C, just inside the Pier Head; and another flight of steps near A: also, there should be a road for carts, &c., made from the Pier, up over the Hill, to meet the road from Fishguard to Newport at D.

If the above Scheme of Fishguard Pier is approved of by your Lordships, and adopted, it will, in my opinion, be found to possess every advantage that a good Pier ought to have, as vessels that draw 19 or 20 feet water may come into it at high-water spring tide, when the sea is smooth; and vessels of 14 or 15 feet draught may
come

come into it at high-water neap tide, when the sea is smooth. But as this Pier is chiefly intended to receive and shelter vessels who cannot lie in the Road in gales of wind from the N. and N. E. quarters, it will be prudent, in such cases, to allow 6 or 7 feet for the hollow or swell of the sea, so that no vessel that draws more than 14 or 15 feet water can safely run for this Pier, even at high-water spring tide, when there is a heavy sea from the N. E. quarter.

In fine weather the Harbour will contain some hundred sail of vessels, large and small; but in gales of northerly and N. E. wind, a hundred sail, large and small, are as many as can be sheltered by the Pier, as the Plan I have proposed is not the most extensive that Fishguard will admit of, but only such as will receive and shelter the general class of merchantmen

chantmen that now use the Irish Channel.

I have the honour to be,

MY LORDS,

Your Lordships' most obedient

And most humble Servant,

GRÆME SPENCE.

FISHGUARD HARBOUR,

May 6, 1790.

JUDGED

JUDGED ESTIMATE

OF THE

*Expence of building the Proposed Pier at
FISHGUARD, containing about 400,008
cubic Feet, or about 25,000 Tons: founded
upon the Price of Materials and Labour
in Pembrokeshire.*

	£.	s.	d.
To 142,000 cubic feet, or 8875 tons of large stones (from about 6 tons weight to 1 ton each, as the work rises upwards) in the foun- dation, and outside facing wall of the pier, at about 10s. per ton, including quarrying, squaring, and carriage	-	-	4,437 10 0
F			T.

To workmanship in the
above part of the pier,
about 1s. per ton -

£. s. d.
443 15 0

To mortar in the above part
of the pier, about 8d.
worth in each ton of the
building - -

295 16 0

To 10,008 cubic feet, or
625½ tons of large stones
in the parapet wall, in-
cluding quarrying, squa-
ring, carriage, workman-
ship, and mortar, at the
above rate per ton -

364 16 6

To the *caisson* for the foun-
dation and that part of
the pier always under wa-
ter; also for oak dove-
tail cramps to secure the
stones in their places in
the foundation and out-

fide

side facing wall; also for
iron cramps to secure the
top course of stones in
their places, and which
may be estimated about

£. s. d.

6,000 0 0

To 243,000 cubic feet, or
15,187½ tons of small
rough-squared stones for
the interior part of the
pier, at about 3s. per
ton, including quarrying
and carriage

2,278 2 6

To workmanship in the in-
terior part of the pier,
about 8d. per ton

506 4 8

To mortar in the interior
part of the pier, about 6d.
worth in each ton of the
building

374 13 9

To 1 capstan

8 0 0

To

To 1 signal-post, flag, and lantern	£. 20 0 0
To 8 oak pier posts	5 0 0
To 18 pier fenders	30 0 0
To 2 flights of steps	40 0 0
Total for building the pier	£. 14,785 18 5

GRÆME SPENCE.



THE END.

